



October 2014

FR Docket # 2014-02939

Dear Members of the Dietary Guidelines Advisory Committee:

JPA appreciates the opportunity to submit comments to the 2015 Dietary Guidelines Advisory Committee (DGAC) as they relate to fruit and vegetable juice consumption.

The Juice Products Association (JPA) is a trade association whose international membership consists of major processors, growers, packers, brokers and distributors of a wide variety of 100% fruit and vegetable juices, juice beverages, drinks, jams, jellies, fruit spreads and other fruit products. Our members represent a significant majority of the juice and juice beverage processors in the United States. The fruit and vegetable juice industry is engaged in encouraging American consumers to improve the quality of their diet by increasing fruit and vegetable consumption. As such, we support the goals of the DGAC to fight the obesity epidemic threatening our country, reduce the risk of chronic disease and enhance overall health by determining areas in which American consumers may improve dietary quality, such as increasing fruit and vegetable intake.

We reviewed comments and slides presented by Subcommittee 1 and the Added Sugars Working Group during Meeting #5 and though we recognize the value of the information presented, we noticed two points related to fruit and vegetable juice that need to be addressed, specifically the following:

1. **Fruit Juice Concentrate which is Reconstituted to Single-Strength Fruit Juice Should Not Be Considered An “Added Sugar”**
2. **Fruit Juice Is An Important Part of A Quality Diet**

**Fruit Juice Concentrate Reconstituted to Single-Strength Fruit Juice Should Not Be Considered An “Added Sugar”**

The DGAC Added Sugars Working Group specifically referenced the proposed definition of “added sugars” recently published by FDA which states:

**Sugars** that are either added during the processing of foods, or are packaged as such, and include sugars (free, mono- and disaccharides), syrups, naturally occurring sugars that are isolated from a whole food and concentrated so that sugar is the primary component (e.g., fruit juice concentrates), and other caloric sweeteners.<sup>1</sup>

As written, this definition would require virtually all beverages containing juice concentrate as a recipe ingredient, including 100% juice and juice blends from concentrate, to bear nutrition labeling declaring the naturally-occurring sugars contained in the juice to be “added sugars.” JPA believes that this aspect of the proposed “added sugars” definition would be likely to confuse consumers and would

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<sup>1</sup> U.S. Food and Drug Administration. Food Labeling: Revision of the Nutrition and Supplement Facts Label. 79 Federal Register 11880; March 3, 2014.

unnecessarily penalize those beverages that are not formulated by direct expression of juice from fruit, but contain juice concentrate reconstituted to single-strength Brix levels.

Juice concentrates may, in fact, be used to adjust the Brix levels of directly expressed juice.<sup>2</sup> It is important that the DGAC clarify that added sugars do not include juice concentrates used to formulate 100% juice or 100% juice blends, or dilute juice beverages, and do not include juice concentrates that are added to juices and dilute juice beverages to adjust soluble solids content in accordance with 21 CFR 102.33 and the standards of identity in 21 CFR Part 146 and Part 156.

JPA recommends that the DGAC consider the definition for “sugars” in 21 CFR 101.9(c)(6)(ii) be used in part to define “added sugars.” “Added sugars” could be defined as:

the sum of all free mono- and disaccharides that are added to a food or beverage *for purposes of sweetening* or ingredients characterized by free mono- and disaccharides that are added to a finished food or beverage *for purposes of sweetening*.

JPA requests, however, that notwithstanding the foregoing definition, “added sugars” shall **not** include sugars that are found in whole fruits, including dried or concentrated forms and fruit juice concentrates that are reconstituted to single-strength in a wide variety of 100% fruit and vegetable juices, juice beverages, drinks, jams, jellies, fruit spreads and other fruit products. Consequently, the mere presence of fruit juice concentrate in a food or beverage does not necessarily imply the food or beverage contains an “added sugar”.

Adopting this approach would align with the current definition of “no added sugars.” In FDA’s 1993 preamble to its final rule defining this nutrient content claim, FDA addressed fruit juices in this context directly, advising that “the addition of water to a juice concentrate to produce a single-strength juice would not preclude the use of a ‘no added sugar’ claim.”<sup>3</sup> This statement makes clear that the mere presence of the fruit juice concentrate does not *per se* disallow a “no added sugar” claim.

Furthermore, there is no scientific or nutritional justification for this difference in treatment of expressed versus “from concentrate” juice. Concentrated juice results simply from the evaporation of water from the fruit juice. This concentrates the soluble solids, including sugars and other nutrients from the expressed juice. When juice is made from concentrate, the water previously removed during concentration is simply put back to return the juice back to its single-strength Brix level. All of the sugars in the reconstituted juice come from the fruit itself – the juice sugar content is similar to a like quantity of expressed juice.

Currently, a “no added sugar” claim is allowed on 100% juice from concentrates, and science shows that juice reconstituted to its single-strength Brix levels contains similar amounts of sugar as compared to its expressed counterparts. Consequently, JPA respectfully requests that the DGAC modify their report to exclude from the definition of “added sugar” the sugars that are found inherently in juice concentrates when the concentrate is used to make 100% juice and juice blends, and juice beverages and juice blend beverages that contain less than 100% juice.

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<sup>2</sup> U.S. Food and Drug Administration. “Beverages that contain fruit or vegetable juice,” 21 Code of Federal Regulations Part 102.33(g)(2).

<sup>3</sup> U.S. Food and Drug Administration. “Food Labeling: Nutrient Content Claims, General Principles, Petitions, Definition of Terms; Definitions of Nutrient Content Claims for the Fat, Fatty Acid and Cholesterol Content of Food.” 58 Federal Register 2328; January 6, 1993.

Based on these considerations, we ask the DGAC to adopt the foregoing suggested changes to the proposed definition of “added sugar.”

100% Fruit Juice can be a vital part of a healthy diet

It is well understood that average American consumers do not consume a sufficient amount of fruits and vegetables in their daily diet. Fruit and vegetable juices are well recognized for their nutritional value, despite the calories contained in the form of naturally occurring sugars. The *2010 U.S. Dietary Guidelines for Americans* state that “...beverages..., such as fat-free or low-fat milk and 100% fruit juice, provide a substantial amount of nutrients along with the calories they contain.”<sup>4</sup> The Guidelines also indicate that 1 cup (8 ounces) of 100% fruit juice is equivalent to 1 cup of whole fruit,<sup>5</sup> grouping fruit, vegetables, and 100% fruit or vegetable juices within the same food composite group because they share similar nutrient profiles (with the exception of fiber).

Generally, 100% juice and juice blends do not contain added sugars, but contain only the natural sugars found in fruit. In addition, the inclusion of juice concentrate and 100% juice made from concentrate in the definition of “added sugars” could negatively impact consumer nutrition and health if consumers reduce their consumption of juice because of misunderstandings related to the source of sugars in the product. This may lead to a shortfall in nutrients such as potassium, folate and vitamin C that naturally come from fruit juices. Furthermore, juice consists of more than just macronutrients and micronutrients. Also lost would be health-promoting phytonutrients such as carotenoids and polyphenols, which are found naturally in juice. Many of these nutrients are not available from alternative beverages. JPA urges the DGAC to also consider the following research findings:

- *100% Juice Helps Meet Fruit Recommendations*  
The majority of Americans, (> 70% based on NHANES data) fail to get the recommended total fruit servings (1-2 servings) per day.<sup>6</sup> One hundred percent fruit juice can help consumers meet fruit recommendations and provide valuable nutrients such as Vitamin C, potassium (a nutrient of concern) and folate. As a nutrient dense beverage, 100% fruit juice can also potentially help improve the quality of the diet.
- *100% Juice Consumption is Associated with Better Diet Quality*  
Research published in 2011 in the *Nutrition Journal* and examining 2003-2006 NHANES data reported that 100% fruit juice consumers, including children 2 to 18 years of age and adults, had better quality diets and higher Healthy Eating Index scores (HEI) than non-juice consumers.<sup>7</sup> They also had lower intakes of added sugars and were more likely to meet Estimated Average Requirements for Vitamins A and C, folate, magnesium and potassium.<sup>8</sup> Similar findings were

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<sup>4</sup> U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans*, 2010. 7th Edition, Washington, DC: U.S. Government Printing Office, December 2010. page 48.

<sup>5</sup> Ibid, page 80.

<sup>6</sup> Unpublished data presented by A. Drewnowski, University of Washington Center for Obesity Research and University of Washington, Seattle, WA at the Experimental Biology meeting on 29 April 2014.

<sup>7</sup> O'Neil CE, et al. Diet quality is positively associated with 100% fruit juice consumption in children and adults in the United States: NHANES 2003-2006. *Nutr J.* 2011;10:17

<sup>8</sup> O'Neil CE, et al. Fruit juice consumption is associated with improved nutrient adequacy in children and adolescents: The National Health and Nutrition Examination Survey (NHANES) 2003-2006. *Public Health Nutr.* 2012;15:1871-1878.

presented at Experimental Biology in April 2014 when newer NHANES data (2007-2010) were analyzed.<sup>9</sup>

In addition to better vitamin and mineral intake, studies report the diets of 100% juice consumers were also higher in whole fruit and either comparable or higher in total dietary fiber than non-juice drinkers. This association has been shown to occur across all age groups.<sup>10,11</sup> Studies show that children's intake of fruits (and vegetables) may track into adolescence and adulthood<sup>12,13,14</sup>; thus, incorporating fruit, in any form, may have long term benefits. Based on these results, 100% fruit juice is complementary and not competitive with whole fruit intake and may actually encourage the intake of whole fruit in the diet. It also does not compete with or displace milk in the diet of children.<sup>15,16</sup>

- *100% Juice Consumption Does Not Affect Weight Status*

While research shows 100% juice drinkers have better vitamin and mineral intakes, as well as high Healthy Eating Index (HEI) scores, an extensive review done by the American Academy of Nutrition and Dietetics (AND) Evidence Analysis Library on the Dietary Metabolic Impact of Juice shows 100% fruit juice is not likely to affect weight status. The AND Evidence Analysis Library specifically looked at the question: "What is the association between intake of 100% fruit juice and weight status or adiposity (e.g., BMI percentile, weight gain, BMI Z-score and fat mass) in children?" and concluded:

*The evidence reviewed does not support an association between 100% fruit juice consumption and weight status or adiposity in children ages 2 to 18 years of age. (Grade II fair amount of evidence).*<sup>17</sup>

- *100% Juice is a Low Caloric Contribution to the Diet*

JPA supports the 2010 Dietary Guidelines to encourage total and whole fruit consumption given that the current consumption patterns fall far short of recommended values. However, while 100% fruit juice can play an important role in helping people meet the Dietary Guidelines recommendations, it is important to note that whole fruit is the primary contributor toward total fruit intake. Recent data, from NHANES 2007-2010 and presented at an Experimental

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<sup>9</sup> Unpublished data presented by T. Nicklas, Baylor College of Medicine, Children's Nutrition Research Center, Waco TX at the Experimental Biology meeting on 29 April 2014.

<sup>10</sup> O'Neil CE et. al. Diet quality is positively associated with 100% fruit juice consumption in children and adults in the United States: NHANES 2003-2006. *Nutr J.* 2011;10:17.

<sup>11</sup> U.S. Department of Agriculture. Diet quality of children age 2-17 years as measured by the healthy eating index-2010. *Nutrition Insights.* 2013.

<sup>12</sup> Kelder S, et al. Longitudinal tracking of adolescent smoking, physical activity, and food choice behaviors. *Am J Public Health.* 1994;84:1121-1126.

<sup>13</sup> Resnicow K, et al. 2-year tracking of children's fruit and vegetable intake. *J Am Diet Assoc.* 1998;98:785-789.

<sup>14</sup> Mikkilä V, et al. Longitudinal changes in diet from childhood into adulthood with respect to risk of cardiovascular diseases: The cardiovascular risk in young Finns study. *Eur J Clin Nutr.* 2004;58:1038-1045c.

<sup>15</sup> Oza-Frank R, et al. Beverage displacement between elementary and middle school, 2004-2007. *J Acad Nutr Diet.* 2012;112(9):1390-1396.

<sup>16</sup> Drewnowski, A et. al. Water and beverage consumption among children age 4-13y in the United States: analyses of 2005-2010 NHANES data. *Nutr J.* 2013 12:85.

<sup>17</sup> Academy of Nutrition and Dietetics, Evidence Analysis Library "What is the association between intake of 100% fruit juice and weight status or adiposity (e.g., BMI percentile, weight gain, BMI Z-score and fat mass) in children?" Academy of Nutrition and Dietetics.

Biology scientific session this Spring, showed current consumption patterns are already skewed toward the consumption of whole fruit (2/3rd of total) rather than 100% juice (1/3rd of total).<sup>18</sup> Furthermore, with regard to caloric contribution, according to NHANES 2005-2010 data, fruit juice contributes only 40-55 kcal of total daily energy intake among children age 4 – 13 years.<sup>19</sup> This amount easily fits within normal caloric intakes of children and can be included in a healthy diet pattern.

JPA supports making dietary choices that include a variety of foods that contribute to a healthy overall diet, and we support the DGAC's efforts in working to promote healthier dietary practices in the United States. As part of this task, it is important the DGAC clearly and precisely identify foods of concern, considering the intended use of a food and its nutritional value. We also continue to support the Guidance, which identifies fruit or vegetable juice as a healthy, nutritious beverage, providing valuable nutrients essential for growth and good health, and which can be an important and valuable part of a healthy diet.

JPA appreciates your consideration of these comments.

Sincerely yours,

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<sup>18</sup> Unpublished data presented by A. Drewnowski, University of Washington Center for Obesity Research and University of Washington, Seattle, WA at the Experimental Biology meeting on 29 April 2014.

<sup>19</sup> Drewnowski, A et. al. Water and beverage consumption among children age 4-13y in the United States: analyses of 2005–2010 NHANES data. *Nutr J.* 2013 12:85.